

CLAIMS

What is claimed is:

1. An active splitter for splitting a received input signal into a plurality of split output signals, the active splitter comprising:

a plurality of active circuits connected in parallel that produce the plurality of split output signals from the received input signal, wherein each active circuit of the plurality of active circuits produces a corresponding split output signal from the plurality of split output signals that is substantially similar to the received input signal.

2. The active splitter of claim 1, wherein each active circuit is a voltage follower.

3. The active splitter of claim 2, wherein the voltage follower may include an emitter follower.

4. The active splitter of claim 3, wherein the emitter follower may include a bipolar transistor.

5. The active splitter of claim 3, wherein the emitter follower may include a Darlington pair transistor.

6. The active splitter of claim 2, wherein the voltage follower may include a source follower.

7. The active splitter of claim 6, wherein the source follower may include a Field Effect Transistor ("FET") transistor.

8. The active splitter of claim 7, wherein the FET transistor may be a MOSFET transistor.

9. The active splitter of claim 7, wherein the FET transistor may be a CMOS transistor.

10. The active splitter of claim 2, wherein the voltage follower may include a differential amplifier.

11. The active splitter of claim 1, further including a controller that is in signal communication with the plurality of active circuits for controlling the electrical characteristics of the plurality of active circuits.

12. The active splitter of claim 11, wherein each active circuit is a voltage follower.

13. The active splitter of claim 11, wherein the controller is in signal communication with a plurality of switches in signal communication with the plurality of

active circuits, wherein each switch of the plurality of switches is capable of switching a corresponding active circuit of the plurality of active circuits to a state of ON or OFF in response to a control signal from the controller.

14. The active splitter of claim 13, wherein each active circuit is a voltage follower.

15. The active splitter of claim 1, further including a first gain stage in signal communication with the plurality of active circuits, wherein the first gain stage receives the received input signal, produces an amplified signal from the received input signal, and passes the amplified signal to the plurality of active circuits.

16. The active splitter of claim 15, wherein the first gain stage includes at least one active circuit that amplifies the received input signal.

17. The active splitter of claim 16, wherein the one active circuit may include common-emitter amplifier.

18. The active splitter of claim 17, wherein the common-emitter amplifier may include a bipolar transistor.

19. The active splitter of claim 18, wherein the common-emitter amplifier may include a Darlington pair transistor.

20. The active splitter of claim 16, wherein the one active circuit may include common-source amplifier.

21. The active splitter of claim 20, wherein the common-source amplifier may include a Field Effect Transistor ("FET") transistor.

22. The active splitter of claim 21, wherein the FET transistor may be a MOSFET transistor.

23. The active splitter of claim 21, wherein the FET transistor may be a CMOS transistor.

24. The active splitter of claim 16, wherein the active circuit may include a differential amplifier.

25. The active splitter of claim 16, further including a controller that is in signal communication with first gain stage for controlling the at least one active circuit.

26. The active splitter of claim 25, wherein the controller is in signal communication with the plurality of active circuits for controlling the electrical characteristics of the plurality of active circuits.

27. The active splitter of claim 26, wherein each active circuit is a voltage follower.

28. The active splitter of claim 26, wherein the controller is in signal communication with a plurality of switches in signal communication with the plurality of active circuits, wherein each switch of the plurality of switches is capable of switching a corresponding active circuit of the plurality of active circuits to a state of ON or OFF in response to a control signal from the controller.

29. The active splitter of claim 28, wherein each active circuit is a voltage follower.

30. The active splitter of claim 27, wherein the controller is capable of switching between the at least one active circuit to the plurality of voltage followers.

31. A method for splitting an input signal into a plurality of output signals, with an active splitter, the method comprising:

receiving the input signal with a plurality of voltage followers connected in parallel; and

producing the plurality of output signals with the plurality of voltage followers, wherein each voltage follower of the plurality of voltage followers produces a corresponding output signal of the plurality of output signals that is substantially similar to the input signal.

32. The method of claim 31, further including amplifying the input signal prior to the input signal being received by the plurality of followers.

33. The method of claim 32, further including:
determining the output values produced by the followers with a controller;
comparing the output values produced by the followers with the input signal to the followers; and

adjusting the amplification of the input signal with the controller based on the comparison of the output values produced by the followers and the input signal to the followers.

34. An active splitter for splitting an input signal into a plurality of output signals, with an active splitter, the active splitter comprising:

means for receiving the input signal with a plurality of voltage followers connected in parallel; and

means for producing the plurality of output signals with the plurality of voltage followers, wherein each voltage follower of the plurality of voltage followers produces a corresponding output signal of the plurality of output signals that is substantially similar to the input signal.

35. The active splitter of claim 34, further including means for amplifying the input signal prior to its being split into a plurality of output signals.

36. The active splitter of claim 34, further including:

means for determining the output values produced by the followers with a controller;

means for comparing the output values produced by the followers with the input signal to the followers; and

means for adjusting the amplification of the input signal with the controller based on the comparison of the output values produced by the followers and the input signal to the followers.